

Chapter 500: STORMWATER MANAGEMENT

SUMMARY: This chapter describes stormwater treatment standards for activities licensed under the Stormwater Management Law and the Site Location of Development Law. It also describes license by rule standards for stormwater infiltration (Appendix D) adopted pursuant to the Waste Discharge Law, and basic performance standards (Appendices A - C) adopted pursuant to all three laws.

- 1. Introduction.** Land use activities can cause changes in stormwater flows. Many pollutants, such as nutrients and metals, attach to fine particles of soil from throughout the watershed. Pollutants and soil are carried in the stormwater down to a waterbody or wetland. A project is required to meet appropriate standards to prevent and control the release of pollutants, and reduce impacts associated with increases and changes in flow.
- 2. Applicability.** This chapter applies to (A) a project that requires a stormwater permit pursuant to 38 M.R.S.A. § 420-D, (B) a development that may substantially affect the environment and requires a site location of development (Site Law) permit pursuant to 38 M.R.S.A. §§ 481 - 490 and (C) certain projects that may be eligible for license by rule for the infiltration of stormwater pursuant to 38 M.R.S.A. § 413.
- 3. Definitions.** The following terms have the following meanings as used in this chapter and Chapter 502. "Lakes most at risk" and "impaired streams" are listed in Chapter 502.
 - A. Compensation Fee Utilization Plan.** A plan that specifies how funds received as a compensation fee payment will be allocated to reduce the impact of stormwater pollution to an impaired water resource.
 - B. Detention basin.** A basin designed and constructed to provide temporary storage of runoff in order to control outflow from the site and peak flow in receiving waters, and to provide gravity settling of pollutants.
 - C. Developed area.** "Disturbed area" excluding areas that are returned to a condition with the same drainage patterns and vegetative cover type that existed prior to the disturbance. Both planting conducted to restore the previous cover type and restoration of any altered drainage patterns must occur within one calendar year of disturbance. "Same cover type" may include hydrologically improved cover type. For example, an area that was previously pasture may be replanted as forest.
 - D. Direct watershed of a waterbody.** The land area that drains, via overland flow, natural or man-made drainage systems, or waterbodies or wetlands, to a given waterbody without first passing through an upstream waterbody classified as GPA.
 - E. Disturbed area.** All land areas that are stripped, graded, grubbed, filled, or excavated at any time during the site preparation or removing vegetation for, or construction of, a project.

"Disturbed area" does not include maintenance of an impervious area within the footprint of that impervious area, but does include new impervious areas. A natural waterbody is not considered a disturbed area.

F. Drainageway. A natural or man-made channel or course within which surface discharge of water may occur. Drainageways include but are not limited to rivers, streams and brooks (whether intermittent or perennial), swales, ditches, pipes, culverts, and wetlands with localized discharge of water.

G. Erosion and sedimentation control best management practices (erosion BMPs). Methods, techniques, designs, practices, and other means to control erosion and sedimentation, as approved or required by the department.

NOTE: For guidance, see "Maine Erosion and Sediment Control BMPs Maine Department of Environmental Protection."

H. H. Impervious area. The total area of a parcel that consists of buildings and associated constructed facilities or areas that will be covered with a low-permeability material, such as asphalt or concrete, and areas such as gravel roads and unpaved parking areas that will be compacted through design or use to reduce their permeability. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and macadam or other surfaces which similarly impede the natural infiltration of stormwater. A natural or man-made waterbody is not considered an impervious area, but is treated as an immediate runoff surface in curve number calculations.

I. Infiltration. Any process specifically used to meet all or part of the stormwater treatment standards of this rule by actively directing all or part of the stormwater into the soil. Infiltration is the process by which runoff percolates through the unsaturated overburden and fractured bedrock to the water table. For the purposes of this rule, infiltration does not include:

- (1) Incidental wetting of soil in ditches, detention basins or the equivalent;
- (2) Wetting of underdrained basins, dry swales, or similar filtration systems; and
- (3) Wetting of buffers meeting department requirements for use as stormwater quality treatment or stormwater quantity control.

Discharge of runoff to areas of the site where the water will collect and percolate is considered infiltration if the volume, rate, or quality of the discharge exceeds the runoff capacity of the stormwater treatment buffers as determined by the department. Underground swales, underdrained ponds, and similar practices that discharge to surface waters or to buffer strips meeting department requirements for quality or quantity treatment buffers are not considered infiltration systems, although these may be used to treat runoff prior to discharge to an infiltration area.

J. Lake or pond. (1) A great pond; or (2) a lake or pond of any size used as a public water supply.

K. Linear Project. A project in which impervious or developed areas are proportionally much longer than they are wide. Examples of linear projects include, but are not limited to, roads, trails, and utility corridors. Golf courses are not linear projects.

L. Major river segment. The rivers or portions of rivers identified as follows: Saco River; Androscoggin River; Kennebec River; West Branch Penobscot River below Elbow Lake; East

Branch Penobscot River below Wassataquiok Stream; Piscataquis River below Dover-Foxcroft; St. Croix River below Grand Lake; Aroostook River below Ashland; and St. John River below the Allagash River.

- M. Parcel.** "Parcel" is defined the same as "parcel of land" in 06-096 CMR 371(1)(L).
- N. Peak flow.** The greatest rate of flow in a drainageway, measured as volume per unit of time, resulting from a storm of specified frequency and duration.
- O. Person.** An individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity. For purposes of an activity requiring review pursuant to the Site Law or Stormwater Management Law, "person" is further defined at 06-096 CMR 321(1)(M).
- P. Practicable.** Available and feasible considering cost, existing technology and logistics based on the overall purpose of the project.
- Q. Protected natural resource.** As defined in the Natural Resources Protection Act at 38 M.R.S.A. § 480-B. These resources are referred to as "wetlands and waterbodies".
- R. Stormwater.** The part of precipitation, including runoff from rain or melting ice and snow, that flows across the surface as sheet flow, shallow concentrated flow, or in drainageways.
- S. Stormwater best management practices (stormwater BMPs).** Methods, techniques, designs, practices, and other means used to control the quality and quantity of stormwater, as approved or required by the department.

NOTE: For guidance, see "Stormwater Management for Maine: Best Management Practices", Maine Department of Environmental Protection .

- T. Subwatersheds.** Areas of the project site with unique times of concentration.
- U. Two (ten, twenty-five)-year, 24-hour storm.** A precipitation event with a 50% (for two-year), 10% (for ten-year), or 4% (for 25-year) probability of being equaled or exceeded during any twenty-four hour period during any given year.
- V. Watershed.** The land area that drains, via overland flow, drainageway, waterbodies, or wetlands to a given waterbody or wetland.
- W. Wetlands.** Coastal and freshwater wetlands as defined in the Natural Resources Protection Act, 38 M.R.S.A. § 480-B.
- 4. Stormwater treatment standards.** The following are the stormwater treatment standards that may apply to a project disturbing more than one acre. More than one stormwater treatment standard may apply to a project. In this case, the stricter standard is applied, as determined by the department. For example, a project may be located in a stream watershed, and the stream may drain to a lake. The standards for the particular stream and lake are compared, and the stricter standard is applied. In instances where the stricter standard is not obvious, the department will determine which standard applies. Lakes most at risk and impaired streams are listed in Chapter 502.

- A. Basic standards** – A project disturbing more than one acre and therefore needing a stormwater permit or a project needing a site law permit, is required to meet basic standard specified in Appendices (A), (B), and (C) of this chapter, unless otherwise specifically provided in the appendices. These standards address erosion and sedimentation control, inspection and maintenance, and housekeeping.

A project resulting in less than 20,000 square feet of impervious area in a most at risk lake or impaired stream watershed, and a project resulting in less than one acre of impervious and five (5) acres developed area in all other watersheds need only meet Basic Standards and therefore qualify for Permit by Rule. Permit by Rule is not available if:

- (1) Resource protection standards in Section 4(B) or phosphorus standards in Section 4(C) must be met;
- (2) Flooding standards in Section 4(D) must be met;
- (3) Review is required pursuant to the Site Location of Development Law; or
- (4) The habitat of a threatened or endangered species may be degraded (see Section 5(D)).

B. Resource protection standards.

- (1) A project disturbing more than one acre and resulting any of the following is required to meet the resource protection standards.
 - (a) 20,000 square feet or more of impervious area in watersheds of streams impaired due to urban runoff;
 - (b) one acre or more of impervious area in all other stream watersheds and coastal watersheds;
 - (c) 5 acres or more developed area in any stream or coastal watershed; or
 - (d) one acre or more of impervious area, but less than three acres of impervious area and five acres of developed area, in most at risk lake watersheds if the lake is not severely blooming. .
- (2) Treatment measures. A project's stormwater management system must include treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. This must be achieved using one or more of the following methods to control runoff from no less than 95% of the impervious area and no less than 80% of the developed areas associated with a project. The department may, on a case-by-case basis, consider alternate treatment measures than those described in this section, provided that the alternate measure provides at least as much channel protection, temperature control, and pollutant removal as the treatment measures below.

An applicant must incorporate low-impact design measures where practicable. Low impact development addresses avoidance of stormwater impacts by minimizing developed and impervious areas on the project site. Project design must consider the location of any protected natural resources, and maintaining natural drainage patterns and pre-construction time of concentration. If practicable, low-impact design must incorporate runoff storage measures dispersed uniformly throughout a site rather than single point collection of stormwater through conventional end-of-pipe structures.

- (a) Detention. A stormwater management system must detain, above a wetpond's permanent pool, a runoff volume equal to 1.0 inch times the subwatershed's impervious area plus 0.4 inch times the subwatershed's non-impervious developed area and discharge it solely through an underdrained gravel filter having a single outlet with a diameter no greater than eight inches. A wetpond must have a storage volume below the permanent pool elevation at least equal to 1.5 inches times the subwatershed's impervious area plus 0.6 inch times the subwatershed's non-impervious developed area, a mean depth of at least three feet, and a length to width ratio of 2:1 or greater.
- (b) Filter. A stormwater management system must detain a runoff volume equal to 1.0 inch times the subwatershed's impervious area plus 0.4 inch times the subwatershed's non-impervious developed area and discharge it solely through an underdrained soil filter having a single outlet with a diameter no greater than eight inches, or through a proprietary filter system approved by the department.
- (c) Infiltration. A stormwater management system must retain a runoff volume equal to 1.0 inch times the subwatershed's impervious area plus 0.4 inch times the subwatershed's non-impervious developed area and infiltrate this volume into the ground.

A waste discharge permit for infiltration from a stormwater infiltration system is considered de minimus and does not require an individual waste discharge license if the standards Appendix D are met. For definitions and provisions associated with the Waste Discharge program, see 38 M.R.S.A. §§ 413 et. seq., and chapters 520 et. seq. for waste discharge licensing concerns.

All drywells and subsurface fluid distribution systems must be registered with and meet all other requirements of the Department's Underground Injection Control Program.

- (d) Buffers. *Buffer standards for resource protection are still under development.*
- (e) Waivers to the resource protection standards. A project may be eligible for a waiver to the resource protection standards as follows.
- (i) The runoff volume to each treatment measure described in Section 4(B) above may be reduced 25% for the following types of projects:
- a) A road serving subdivisions consisting solely of single-family detached residential housings;
 - b) A linear project; and
 - c) A project pretreating the runoff to a filter or infiltration system in a department-approved, flow-through sedimentation device.
- (ii) A project discharging to the ocean or major river segment and using a wetpond to meet resource protection standards is not required to incorporate storage above the wetpond's permanent pool or to install underdrain filters.

A linear project may reduce the portion of the project needing runoff control for resource protection to no less than 75% of the impervious area and no less than 50% of the developed area.

C. Phosphorus standards.

- (1) A project disturbing more than one acre and resulting in any of the following is required to meet the phosphorus standards.
 - (a) 20,000 square feet or more of impervious area in most at risk lake watersheds;
 - (b) one acre or more of impervious area in all other lake watersheds; or
 - (c) 3 acres or more of impervious area or 5 acres or more of developed area in any lake watershed.

An allowable per-acre phosphorus allocation for each most at risk lake will be determined by the department. The department's determination is based upon (i) current water quality, (ii) potential for internal recycling of phosphorus, (iii) potential as a cold-water fishery, (iv) volume and flushing rate, and (v) projected growth in the watershed, and will be used to determine project phosphorus allocations unless the applicant proposes an alternative per-acre phosphorus allocation that is approved by the department. If the project is a new road in a subdivision, only 50% of the parcel's allocation may be applied to the new road unless phosphorus export from both the new road and the new lots is being regulated, in which case the entire allocation for the parcel may be applied.

NOTE: For guidance in calculating per-acre phosphorus allocations and in determining if stormwater phosphorus export from a project meets or exceeds the parcel's allocation, see "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New Development", Maine Department of Environmental Protection.

Applicants may use the Resource Protection Standards (Section 4(B) above) as an alternative to the Phosphorus Standards in lake watersheds if the lake is not severely blooming and the project results in less than three acres of new impervious and 5 acres of developed area.

D. Flooding standards.

- (1) A project resulting in three acres or more of impervious area or 20 acres or more of developed area. is required to meet the flooding standards. Stormwater management systems for these projects must detain, retain, or result in the infiltration of stormwater from 24-hour storms of the 2-year, 10-year, and 25-year frequencies such that the peak flows of stormwater from the project site do not exceed the peak flows of stormwater prior to undertaking the project. If required, this flooding standard applies in addition to the resource protection standards and phosphorus standards described Sections 4(B) and (C), respectively.
- (2) Waiver of Flooding Standard. Certain projects may be eligible for waivers from flooding standard as follows.
 - (a) Discharge to the ocean, a great pond, or a major-river segment provided the applicant demonstrates that the project conveys stormwater exclusively in sheet flow, in a manmade open channel, or in a piped system directly into one of these resources. Prior to requesting a waiver as part of an application, the applicant must secure drainage easements from any downstream property owners across whose property the runoff must flow to reach the ocean, great pond, or river. The applicant must also demonstrate that

any piped or open-channel system in which the runoff will flow has adequate capacity and stability to receive the project's runoff plus any off-site runoff also passing through the system.

- (b) Insignificant increases in peak flow rates from a project site. When requesting a waiver as part of an application, the applicant must demonstrate that insignificant increases in peak flow rates cannot be avoided by reasonable changes in project layout, density, and stormwater management design. The applicant must also demonstrate that the proposed increases will not unreasonably increase the extent, frequency, or duration of flooding at downstream flow controls and conveyance structures or have an unreasonable adverse effect on protected natural resources. In making its determination to allow insignificant increases in peak flow rates, the department shall consider cumulative impacts. If additional information is required to make a determination concerning increased flow, the department may only consider an increase after the applicant agrees, pursuant to 38 M.R.S.A. § 344-B(3)(B), that the review period may be extended as necessary by the department.
- (3) Grading or other construction activity. Grading or other construction activity on the site may not impede or otherwise alter drainageways to:
 - (a) Have an unreasonable adverse impact on a protected natural resource;
 - (b) Flood an area of the parcel not specifically planned and designated for such flooding; or
 - (c) Flood an area of any other parcel unless an easement is obtained.
- (4) Channel limits and runoff areas. The design of piped or open channel systems must be based on a 10-year, 24-hour storm without overloading or flooding beyond channel limits, except when the piped system is overloaded to provide detention or retention of the stormwater. In addition, the areas expected to be flooded by runoff from a 10-year or 25-year, 24-hour storm must be designated in the application and approved by the department, and no buildings or other similar facilities may be planned within such areas. This does not preclude the use of parking areas, recreation areas, or similar areas from use for detention of storms greater than the 10-year, 24-hour storm, if approved by the department. Runoff from the project may not flood the primary access road to the project and public roads as a result of a 25-year, 24-hour storm or, if required by the municipality, MDOT, or MTA, the 100-year, 24-hour storm.
- (5) Level spreaders for discharge control. The peak stormwater flow rate to each level spreader due to runoff from a 10-year, 24-hour storm must be less than 0.25 cubic feet per second (0.25 cfs) per foot of length of level spreader. The minimum length of each level spreader must be 12 feet. The maximum length of each level spreader must be 25 feet, unless otherwise approved by the department. This standard is not applicable for level spreaders discharging runoff to buffers used to meet the resource protection or phosphorus standards.

E. Additional requirement in urban impaired watersheds. Applies to a project resulting in three acres or more of impervious area or 20 acres or more of developed area that is located within the watershed of urban impaired stream identified in Chapter 502. In addition to meeting the basic, resource protection and flooding standards, these projects must pay a compensation fee or perform off-site mitigation based on a project's non-roof impervious acreage and its acreage of roof and non-impervious developed area as defined below:

Type of surface with or without required treatment	Required compensation fee or off-site mitigation credit	
	Compensation fee	Off-Site Mitigation Credit
Non-roof impervious area	\$5,000.00/acre	0.5 credits/acre
Roof or non-impervious developed area	\$2,000.00/acre	0.2 credits/acre

Compensation Fees may only be used in watersheds where Compensation Fee Utilization Plans have been developed and are being locally administered and implemented.

The following table indicates the amount of credit earned for a variety of allowed off-site mitigation activities:

Mitigation Activity	Source Type	Credit Earned
Retrofit with resource protection BMPs at 1/3 required sizing or with approved flow through sedimentation device	Road or High Use Parking	0.5 credits/acre treated
	Low Use Parking	0.3 credits/acre treated
	Roof, other Imp. or Lawn	0.2 credits/acre treated
Retrofit w/ resource protection BMPs at 2/3 required sizing BMPs	Road or High Use Parking	1.0 credits/acre treated
	Low Use Parking	0.6 credits/acre treated
	Roof, other Imp. or Lawn	0.4 credits/acre treated
Retrofit w/ resource protection BMPs at required sizing	Road or High Use Parking	1.5 credits/acre treated
	Low Use Parking	0.9 credits/acre treated
	Roof, other Imp. or Lawn	0.6 credits/acre treated
Eliminate impervious source area, replace with lawn	Road or High Use Parking	1.0 credits/acre treated
	Low Use Parking	0.5 credits/acre treated
Eliminate impervious source area, replace with forest	Road or High Use Parking	2.0 credits/acre treated
	Low Use Parking	1.0 credits/acre treated
Retrofit detention w/ vegetated gravel under-drains	Impervious areas only	0.5 credits/acre treated

[Note: There will probably be other options to earn off-site mitigation credit added to this table in the future].

5. Other applicable protection standards. The following standards apply to a project as specified below.

A. Groundwater protection (infiltration) standard. If pre-treatment is recommended as part of applicable stormwater best management practices or required by the department, pre-treatment of stormwater must occur prior to discharge to the infiltration area. The infiltration area must minimize discharge of soluble pollutants to groundwater, and must be maintained to assure that its capacity for infiltration and pollutant removal is unimpaired. A project must either meet the license by rule standards in Appendix D, or obtain an individual waste discharge license under the Waste Discharge Law.

B. Easements and covenants. Areas used for stormwater treatment must be protected from alteration through easements or covenants according to the following standards.

- (1) Areas not owned or controlled by the applicant. If a project changes the flow type (for example, sheet to shallow concentrated), changes the flow channel, increases the stormwater discharge, or causes flooding in areas not owned or controlled by the applicant, the applicant must secure easements except for a discharge to a public sewer system meeting the requirements of Section 4(D)(2). These easements must include all areas of flow or areas to be flooded during the 2-, 10-, and 25-year, 24-hour storms on properties not owned or controlled by the applicant, must be secured from all affected property owners, and must be recorded at the appropriate county registry of deeds. Drainage easements must extend up to, but need not include, the channel of any river, stream or brook accepting flow from the project. Areas to be flooded include those to be flooded due to overloading of underground storm sewers and equivalent utilities.
 - (a) Suitable land-use restrictions must be included in the easements to prevent any activity that might affect drainage across the area.
 - (b) Drainage easements over private property must conform with the center line of drainageways, and must have a minimum width of 30 feet, or 10 feet on each side of the channel required to accommodate the flow from a 25-year, 24-hour storm, whichever is greater. Drainage easements for piped drainageways must have a minimum width of 30 feet, or 10 feet on each side of the outer edge of the pipe, whichever is greater.
 - (c) The increase in flow may not cause erosion of soil or sediment or otherwise have an adverse impact on existing uses of the affected property.
- (2) Areas transferred. When the permittee transfers land that contains areas of flow or areas to be flooded during the 2-, 10-, or 25-year, 24-hour storm, restrictive covenants protecting these areas must be included in any deeds or leases and recorded at the appropriate county registry of deeds. Also, in all conveyances of such areas and areas containing parts of the stormwater management system, the applicant shall include deed restrictions making the conveyance subject to all applicable terms and conditions of the permit. These terms and conditions must be incorporated by specific and prominent reference to the permit in the deed. All conveyances must include in the restrictions the requirement that any subsequent conveyance must specifically include the same restrictions unless their removal or modification is approved by the department. These restrictions must be written to be enforceable by the department, and must reference the permit number.
- (3) Buffers. Buffers must be protected from alteration through deed restrictions, conservation easement to which the department is a party, or similar measures. See Appendix F.

C. Discharge to freshwater or coastal wetlands. Stormwater treatment standards for the waterbody must be met before the stormwater enters an intervening wetland, unless otherwise approved by the department. Freshwater and coastal wetlands must receive stormwater in the same manner as before the project unless otherwise approved or required by the department. In general, new or increased stormwater discharges into wetlands must be put into sheet flow using level spreaders designed to meet the requirements in Section 4(D)(4). The department will consider alternate methods if those methods will not unreasonably adversely affect the wetland.

The discharge of runoff to a wetland may not increase the storage duration within the wetland for more than 24 hours from runoff due to a 2-year storm, and may not increase the mean storage depth within a wetland more than two inches from the runoff due to a 2-year storm. Cumulative impacts due to runoff from other projects will be considered when applying this standard to any wetland.

- D. Threatened or endangered species.** Additional stormwater treatment standards may apply on a case-by-case basis if the department determines that such standards are necessary to avoid degrading the habitat of a threatened or endangered plant or animal species or violate protection guidelines.

NOTE: Title 12 M.R.S.A. § 7755-A prohibits state agencies from issuing a permit that will significantly alter the habitat of any species designated as threatened or endangered species or violate protection guidelines.

- E. Additional controls.** A stormwater project that includes more than 3 acres of impervious area or 5 acres of developed area and Site Law developments of any size may be required to use additional controls if the department determines they are necessary to avoid an unreasonable impact on any wetland or waterbody due to pollutants that are not adequately addressed by the standards described above. This is a case-by-case determination based upon factors such as the size, nature and intensity of the development, characteristics of the affected natural resource, topography and soils.

For example, stormwater from a metallic mineral mining or advanced exploration activity regulated under 06-096 CMR 200 may contain contaminants, such as high concentrations of dissolved metals, or be very acidic or alkaline, for which stormwater quality BMPs for other commercial or industrial developments do not provide adequate treatment.

NOTE: Projects resulting in 3 acres or less of impervious surface permitted under the Stormwater Management Law, and projects not requiring a Site Law permit, may be required to address phosphorus, nitrates and suspended solids, but are not required to directly address other dissolved or hazardous materials unless infiltration is proposed. 38 M.R.S.A. 420-D(1)(in part).

- F. Authorization for discharges to public storm sewer systems.** If runoff from a project site will flow to a publicly-owned storm sewer system, then the applicant must obtain authorization from the system's owner to discharge into the system. At its discretion, the department may require the applicant to demonstrate that the system has adequate capacity for any increases in peak flow rates and volumes to the system.
- 6. Elimination or reduction of off-site existing sources and compensation fees.** The department may allow the applicant to reduce the acreage treated or lower phosphorus export reduction required to meet resource protection or phosphorus standards in Section 4(B) or (C) by eliminating or reducing other off-site sources, or through payment of a compensation fee, in accordance with the requirements of Sections 6(A) through (D) below. The project must still meet the flooding standard described in Section 4(D), if applicable.
- A. A project required to meet the resource protection standard that is not in an urban impaired stream watershed.** If a project is required to meeting the resource protection standard and it is not in an impaired, urban stream watershed, the department may allow the percent of a

project's impervious or developed acreage that must be treated to be reduced if the applicant agrees to eliminate or reduce an off-site impervious stormwater source. A source is considered to be eliminated if impervious area is removed, the underlying soil is aerated, and the area revegetated and returned to a wooded condition. A source is considered to be reduced if the impervious area is removed, the underlying soil is aerated and the area revegetated and maintained as a lawn or other non-forested area. The amount of reduction in treated acreage allowed will be determined on a case by case basis by the department, based on the existing and future uses of the project site, the existing and future use of the eliminated or reduced off-site impervious area, and the equivalency of these uses. In determining whether to approve an off-site mitigation proposal, the department will determine whether the expected reduction in stormwater pollutant export and stormwater flows can reasonably be expected to exceed the stormwater pollutant export and stormwater flow resulting from the untreated acreage at the project site.

- B. A project in a lake watershed that is required to meet the phosphorus standard.** If a project is required to meet the phosphorus standard, an off-site mitigation credit may be allowed, but only to eliminate or reduce off-site sources of phosphorus. A source is considered to be eliminated if impervious area is removed, and the area is revegetated and returned to a wooded condition. A source is considered to be reduced if the impervious area is removed, and the area is revegetated and maintained as lawn or other non-forested area. For every two pounds of estimated off-site phosphorus export that is eliminated or reduced, estimated on-site phosphorus export may be reduced by one pound, provided eliminating or reducing off-site existing sources does not require maintenance. If the applicant can demonstrate, based on type of impervious area and intensity of use, that the level of phosphorus export from the eliminated or reduced off-site area is equivalent to or greater than that expected from the proposed impervious area, the credit may be allowed at a ratio of 1 to 1. As an alternative, a compensation fee may be paid to off-set no more than 50% of the required reduction in export at a rate of \$10,000 per pound of phosphorus export, as described in 38 M.R.S.A. § 420(D)(11)(A).

NOTE: For guidance in determining phosphorus export see "Phosphorus Control in Lake Watersheds", Maine Department of Environmental Protection .

- C. Location.** The off-site mitigation activity must be located in the same watershed as the project to off-set the impact of the pollutant export from the project. More than one mitigation activity may be applied to a project.
- E. Protection.** Areas in which an off-site existing stormwater source has been reduced or eliminated as described in Section 6(A) and (B) must be protected from alteration through deed restrictions, conservation easement to which the department is a party, or similar measures. See Appendix F.
- F. Maintenance and transfer.** Areas revegetated to off-set project impacts must be maintained as required by the permit, and any transfer of these areas must be made subject to deed restrictions that require such maintenance and are enforceable by the department.

[Note to reviewers: Proposed revisions to the submission section are not intended to reduce or eliminate submissions overall. More specifics on the submissionss contained in this rule will be provided in another context.]

7. Submissions and pre-application meetings. The applicant shall use the application form provided by the department and include evidence that affirmatively demonstrates that the standards will be met, including information such as described in this section, when appropriate.

A. Pre-application meetings. A pre-application meeting is required for a stormwater project that must meet standards other than the Basic Standard (PBR), unless the requirement for such a meeting is waived by the department. A pre-application meeting is required under the department's administrative rules for a site law permit.

B. Design requirements. Stormwater management systems that include any form of conveyance structure must be prepared under the supervision of, and dated, signed and sealed by, a Registered Professional Engineer in the State of Maine, who by education, training, or experience is knowledgeable in stormwater management, with the following exception. If a project includes less than 3 acres of impervious area, and stormwater management will be achieved using vegetative control measures (such as vegetative buffers) and open stormwater conveyance channels (such as ditches, swales and level spreaders) that drain no more than one acre of land, then the stormwater management system may be designed by a professional who is registered, licensed, or certified in a related land-use field, and by education, training, or experience is knowledgeable in stormwater management, and has received specific training in the design of ditches, grassed swales, and level spreaders at a department-sponsored stormwater management workshop.

C. Basic standards submissions. These submissions are required for all sites.

(1) Erosion and Sedimentation Control Plan. A plan showing designs for basic temporary and permanent stabilization measures for all disturbed areas within the project and for all proposed stormwater management structures must be submitted with the application. Erosion and sedimentation control plan requirements are described in Appendix A of this rule. At a minimum, the plan must include the following:

(a) Sediment barriers. Barriers must be installed before construction begins and must be located downgradient of the proposed disturbance. The barriers must be repaired as needed to prevent soil movement off the project site.

(b) Erosion control measures. The project site must be stabilized with mulch and seeding, riprap or a road sub-base within seven (7) days of the project being brought to final grade.

(c) Stabilization measures. Best management practices must be provided and implemented as a final stabilization measure for the entire project site.

NOTE: A project that is required to meet only the Basic Standard and is regulated only by a permit-by-rule may use the "Citizen's Guide to Best Management Practices to Use with Maine Construction General Permit." This guide can be found at <http://www.maine.gov/dep/blwq/docstand/stormwater/vol3guide.pdf>.

A Stormwater Management Law project that include more than one acre of impervious area or 5 acres of developed area and Site Law developments of any size must provide a full erosion and sediment control plan.

NOTE: The Maine Erosion and sediment Control BMP manual (2003) is available for more detailed information at <http://www.maine.gov/dep/blwq/docstand/escbmps/index.htm>

- (2) Inspection and maintenance plan. A plan for the inspection and maintenance of the stormwater management system and permanent erosion and sedimentation controls for the project site. Maintenance of stormwater management systems is required. Inspection and maintenance requirements are described in Appendix B of this rule. Additional requirements may be applied on a site-specific basis. The applicant must demonstrate through submission of an executable contract with a qualified professional that maintenance on stormwater management structures will be performed as required.
- (3) Housekeeping. These performance standards apply to all sites. Housekeeping requirements are described in Appendix C of this rule.

D. Permit by rule. The applicant must use the application form provided by the department. The application is deemed approved 14 calendar days after the department receives the application form, unless the department approves or denies the application, or notifies the applicant that the applicant is ineligible for permit by rule, or requires additional information or further review, prior to that date. If the department does not otherwise notify the applicant within the 14-day period, the application is deemed approved by the department.

- (1) Discretionary authority. Notwithstanding compliance with the PBR applicability requirements and standards set forth in this chapter, the department may require an individual permit application to be filed in any case where credible evidence indicates that the activity:
 - (a) may violate the standards of the Stormwater Management Law or Site Law;
 - (b) Could lead to significant environmental impacts, including cumulative impacts; or
 - (c) Could adversely impact a resource of special concern.

E. Resource protection and phosphorus standards submissions. A project required to meet resource protection or phosphorus standards must provide the following information and design specifications.

- (1) Narrative. A narrative describing site layout, and on-site and off-site watershed hydrology, including all new and existing buildings and facilities, which may be affected by the site runoff. Provide the total amount of impervious area, disturbed area, and developed area created by the project.
- (2) Drainage Plans. Show all topographic features, such as buildings and other facilities, drainageways, cover type, roads, drainage easements and subwatershed boundaries for pre-construction and post-construction conditions. Show all hydrologic flow lines and hydrologic soil groups boundaries on a plan and identify each subcatchment, reach, and pond consistent with the runoff model. For post-construction conditions, show all new stormwater management structures and changes to the hydrologic drainage patterns.

- (3) Calculations. The stormwater runoff calculations for resource protection must be in accordance with acceptable engineering practice, including the following:
- (a)

(a) Provide the calculations used to determine the water volume needed to be filtered or infiltrated based on the proposed site development.

(b) Sizing for channel protection buffers. *[under development]*

- (4) Details, designs, and specifications. Submit design details for each stormwater runoff control structure that will be built or installed on the site.

Stormwater management ponds and basins. Show the plan view and cross-sectional views of each pond's embankment(s), and details of all needed pond structures. Identify peak storage elevations within the pond for the flooding or resource protection standard requirement, as applicable.

(a) Filters. *[under development]*

(b) Infiltration areas. *[under development]*

(c) Buffers. *[under development]*

(5) Phosphorus export calculations. Submit for a project using the phosphorus standard.

NOTE: For guidance, see "Stormwater Management for Maine: Best Management Practices."

NOTE: For guidance in determining phosphorus export see "Phosphorus Control in Lake Watersheds", Maine Department of Environmental Protection.

- F. Flooding standards submissions.** If a project must meet the flooding standards, the project must be designed to control the peak flows from the 2, 10 and 25-year, 24-hour storms. This is in addition to the requirements listed in Section 7(D) above.

- (1) Pre-construction and post-construction design. Provide runoff curve number computations and time of concentration calculations for each subwatershed. A "subwatershed" is an area that drains to a specific stream or lake. Areas may qualify as subwatersheds based on the characteristics of the site or the model used. The department will review all methods of determining subwatersheds on a case-by-case basis. Provide a reach description and reach routing analysis for each drainage structure and provide pond descriptions and storage routing calculation for any stormwater management structure, detention pond and culvert backwater areas.

Acceptable stormwater methodologies and models include but are not limited to "TR-20 - Computer Program for Project Formulation - Hydrology," Second Edition, U.S. Department of Agriculture, Soil Conservation Service (May 1983); "TR-55 - Urban Hydrology for Small Watersheds," Second Edition, U.S. Department of Agriculture, Soil Conservation Service (June 1986); TR-55 Microcomputer Program, Version 2.0, (January 15, 1990); and "HEC-1 Flood Hydrology Package", U.S. Army Corps of Engineers. Any methodology other than those listed must have prior approval from the department.

G. Long-term maintenance submissions. Maintenance of stormwater management systems is required. Inspection and maintenance requirements are described in Appendix B of this rule. Additional requirements may be applied on a site-specific basis. The applicant must demonstrate through submission of an executable contract with a qualified professional that maintenance on stormwater management structures will be performed as required.

The applicant must maintain all components of the stormwater management system until it is formally accepted by the municipality or quasi-municipal district, or is placed under the jurisdiction of a legally created association that will be responsible for the maintenance of the system. The department must approve the charter of such an association. If a municipality or quasi-municipal district chooses to accept a stormwater management system, it must provide a letter to the department stating that it assumes responsibility for the system, and will maintain all components of the system in compliance with department standards. Upon such assumption of responsibility, and approval by the department, the municipality, quasi-municipal district, or association must comply with all terms and conditions of the permit.

H. Transfer. An applicant may apply for a transfer of a Stormwater Management Law project pursuant to Section 9(A)(4). If the project was approved under Permit by Rule, the transferee of the property must apply for a new Permit by Rule.

I. Modification. An applicant may apply for a modification of an individual Stormwater Management Law permit. If a permit by rule needs to be modified, the applicant must file a revised permit by rule.

8. Municipal programs. The department may allow a municipality or a quasi-municipal organization, such as a watershed management district, to substitute a management system for stormwater for the stormwater permit requirement pursuant to 38 M.R.S.A. § 420-D(2). The management system may apply to an entire watershed, or a subwatershed, of a receiving water, and may include multiple watersheds within the jurisdiction of the municipality or quasi-municipal organization. A project located within the area served by a management system approved by the department is exempt from the stormwater permit requirements contained in this rule.

The municipality or quasi-municipality may elect to have the substitution take effect at the time the system is approved by the department, or at the time the system is completed as provided in the implementation schedule provided by the department.

A. Program approval criteria. To meet this exemption, the municipality or quasi-municipal organization must demonstrate that the following criteria are met.

- (1) Relationship to water quality. The municipality or quasi-municipal organization must have a stormwater treatment plan that, upon implementation, will result in the collective treatment of stormwater from new and existing sources within the watershed and will result in water quality in the receiving water that is as good, or better, than would be achieved with stormwater permits issued by the department for individual projects.
- (2) Funding and implementation. The plan must include funding provisions and an implementation schedule that provides that the treatment system for new and existing sources will be in place and functioning within five years unless a longer time period, not to exceed 10 years, is approved by the department.

NOTE: The municipality or quasi-municipal organization may institute fees or secure other funding sources prior to the operation of the plan.

- (3) Annual reporting. The plan must also include a provision for annual reporting on progress toward implementation and a listing of the new development within the jurisdiction of the management system.
- B. Reinstatement of permit requirement.** The department may reinstate the stormwater permit requirement if it finds that the implementation schedule is not being met, or that the management system is not achieving the plan's objectives.
- C. Plans.** The department may review and approve a stormwater plan submitted by a municipality or a quasi-municipal organization, such as a watershed management district. The stormwater plan may apply to an entire watershed, or a subwatershed, of a receiving water, and may include multiple watersheds within the jurisdiction of the municipality or quasi-municipal organization.
- 9. Conditions of approval..** The following conditions of approval apply to a stormwater permit (individual or permit by rule) required pursuant to 38 M.R.S.A. § 420-D.
- A. Standard conditions of approval.** Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions.
- (1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. § 420-D(8) and is subject to penalties under 38 M.R.S.A. § 349.
- (2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- (3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted **WITH CONDITIONS**, and indicates where copies of those conditions may be obtained.
- (4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

- (5) Initiation of project within two years. If the construction or operation of the activity is not begun within two years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference.
- (6) Reexamination after five years. If the project is not completed within five years from the date of the granting of approval, the department may reexamine its approval and impose additional terms or conditions or prescribe other necessary corrective action to respond to significant changes in circumstances or requirements which may have occurred during the five-year period.
- (7) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.
- (8) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

B. Special conditions. The department may, as a term or condition of approval, establish any reasonable requirement to ensure that the proposed project will proceed in accordance with the Stormwater Management Law and rules. However, terms and conditions must address themselves to specifying particular means of satisfying minor or easily corrected problems relating to compliance with the Stormwater Management Law, and may not substitute for or reduce the burden of proof of the developer to affirmatively demonstrate to the department that each of the standards of the Stormwater Management Law has been met.

10. Recording of order. The department shall record each order approving or modifying a permit pursuant to Chapters 500 and 502 in the appropriate registry of deeds.

11. Severability. Should any provision of these rules be declared invalid or ineffective by court decision, the decision shall not invalidate any other provision of these rules.

12. Transition. For purposes of the stormwater management law only, Laws 1995, c. 704, § B-4 provides that impervious areas and disturbed areas created prior to July 1, 1997 are not counted when determining the amount of such areas on a parcel, although such areas may be reviewed to the extent necessary to ensure that controls intended to address new areas function adequately. New construction on an impervious area created prior to July 1, 1997 is not counted when determining the amount of impervious area on a parcel. An area is considered "created" for purposes of this provision when local approval has been received, and construction has begun.

If the definition for "impervious area" is met, examples of "new construction on an impervious area created prior to July 1, 1997", which is not counted toward total impervious area for purposes of determining jurisdiction under the stormwater management law, include the following:

- A. A building demolished and a parking lot created within the footprint of the building;
- B. A gravel parking lot paved over;
- C. A building constructed on a parking lot; and
- D. Walks, plazas, patios constructed on a parking lot.

NOTE: The examples in (1), (3) and (4) above would be counted toward the higher threshold for "structure area" under the Site Law. The Site Law addresses larger developments under several types of standards, and does not include an exemption for new construction on impervious area created prior to a specific date.

- 13. Permit shield.** Compliance with a permit issued in accordance with this chapter is considered compliance with Section 4 of this chapter. If a stormwater best management practice is approved by the department and, although adequately and appropriately constructed and maintained by the permittee, as determined by the department, it fails to meet a water quality standard provided in Section 4, the permittee is not in violation for failing to comply with the standard.

This section does not apply if an experimental measure is approved. See Section 13.

NOTE: This section does not apply to approvals pursuant to 38 M.R.S.A. § 413, the Waste Discharge Law. For the provision applicable to the Waste Discharge Law, see 38 M.R.S.A. 414(8) "Effect of license".

Nothing in this section alters or affects the liability of the permittee if a violation has occurred prior to permit issuance.

- 14. Experimental measure.** The department may, on a case-by-case- basis, approve an experimental best management practice when requested by an applicant. However, in this case, the "permit shield" provision in Section 12 will not apply, and the department may require the applicant to collect and submit sufficient information on the performance on the best management practice to allow evaluation. If the best management practice does not perform at least as well as would have been expected from otherwise available best management practices, the department may require the permittee to replace or otherwise redesign the system.

The department may only approve an experimental practice on a site where it would be possible to replace or redesign the experimental system if necessary.